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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,140	10/22/2003	Shinichi Namura	FL0253USNA	4965

23906 7590 03/23/2005

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EXAMINER

HU, HENRY S

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/691,140	<b>Applicant(s)</b> NAMURA, SHINICHI	
	<b>Examiner</b> Henry S. Hu	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment of February 9, 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 1-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-23-2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is in response to faxed Amendment filed on February 9, 2005. Parent **Claim 1** was amended to be a **melt processible composition** and further amended to blend **35** to 55 by weight of polytetrafluoroethylene with the modifier PTFE. **New independent Claim 5** was added; a support can be found on **page 1 at lines 11-12**. It relates to a container using the composition of Claim 1 but using **30** to 55 by weight of polytetrafluoroethylene to blend with the modifier PTFE. With respect to the specification objections (a) - (c), the Applicants have amended the paragraph beginning in page 1 at line 31 for the use of “(CF<sub>2</sub>)<sub>m</sub>” and “(CF<sub>3</sub>)<sub>q</sub>” as well as the equation of “C = A x (1 – (B/100))” on page 6 at Table 3. The Applicants allege that “**Toyo**” on page 4 at line 23 is correct. The examiner thereby withdraws specification objections in the previous Office Action dated August 9, 2004. **Claims 1-5 are now pending.** An action follows.

### Response to Argument

2. Applicant's argument filed on February 9, 2005 has been fully considered but they are not persuasive. The focal arguments related to the patentability will be addressed as follows: In view of the Applicants' argument on pages **4-5** of Remarks, the 102 and 103 rejections are all sustained, and a claim objection is applied due to the amendment of Claim 1.

***Claim Objections***

3. Claims 1-4 are objected to because of the following informalities:

On Claim 1 at line 3, the use of “35 to 55 by weight of polytetrafluoroethylene” to blend with “70 to 45 % by weight of a copolymer” is improper. In the case of using 70 to 65 wt% of the copolymer, the final blend will be “over 100 %”.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. *The limitation of parent Claim 1 of the present invention relates to a melt processible composition comprising (A) 70-45 wt% of a copolymer of TFE (95-90 wt%)/PAVE (5-10 wt%), and (B) 35-55 wt% of PTFE, wherein said copolymer has a melt flow rate of 0.1-1.7 g/10 min at 372 +/- 1 °C, and said PTFE has a melt flow rate of not less than 1 g/10 min at 372 +/- 1 °C. Other parent Claim 5 relates to a container using the composition of Claim 1 but using 30 to 55 by weight of polytetrafluoroethylene to blend with the modifier PTFE. See other limitations of dependent Claims 2-4.*
7. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Heffner et al. (USPG-PUB 2002/0061398 A1) **for the reasons set forth in paragraphs 6-7 of office action dated 8-9-2004 as well as the discussion below.**
8. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Branca (US 5,708,044) **for the reasons set forth in paragraphs 8-9 of office action dated 8-9-2004 as well as the discussion below.**

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9. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Leck (US 6,248,435 B1) **for the reasons set forth in paragraphs 10-11 of office action dated 8-9-2004 as well as the discussion below.**

10. **Applicants:** The Applicants have claimed in two parent Claims 1 and 5, an unexpected way of obtaining a fluorine-containing melt-processible composition by blending a PTFE homopolymer (70-45 wt%) with a PTFE (95-90 wt%) /PAVE (5-15 wt%) copolymer, wherein the amount used for said PTFE copolymer in Claim 1 is 35-55 wt%, while in Claim 5 is 30-55 wt%.

With respect to **102** rejections over Heffner, the Applicants allege that Claim 1 has been amended to use copolymer in **35-55 wt%** instead of 30-55 wt%; Claim 6 is directed to a container while Heffner is making a fiber.

With respect to **102 and/or 103** rejections over Branca or Leck, the Applicants allege that **each reference is not directed to make melt processible blend.** The Applicants further allege that a broader range of viscosity is found in Leck's blend. There is no reason or motivation to apply the inherent properties since they are related to different polymer blends.

11. **Examiner:** As discussed in the earlier office action for **102 rejection over Heffner**, the Heffner reference has disclosed **a blend of two different polytetrafluoroethylene**, one being **5-**

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**90 wt%** of the homopolymer of TFE and the other one being a PFA polymer (or called a modified PTFE) containing a small amount of co-monomer such as perfluoro(alkyl vinyl ether) (page 1, paragraphs 0007 and 0008; page 2, paragraph 0025).

With respect to the limitation of “melt processible” on the blend, Heffner has already disclosed such a limitation on his polymer blend since the above-mentioned copolymer has a **melt flow rate** (MFR) of 0.5-500 g/10 min at 372 +/- 1 °C (page 2, paragraph 0021), while PTFE polymer has a viscosity close enough with that of PFA in order to permit adequate mixing in blending (page 2, paragraph 0026).

The amendment of Claim 1 by the Applicants to use 35-55 wt% of polytetrafluoroethylene in the blend is improper and thereby does not change the status of the rejection. As already discussed in claim objection, in the case of using 70 to 65 wt% of the copolymer the final blend will be “**over 100 %**”.

12. As discussed in the earlier office action for **102 and/or 103 rejections over Branca or Leck**, both references do have disclosed the preparation of such a PTFE blend in terms of composition and weight ratio. For instance, both the composition and the weight ratio of PTFE blend can be seen at column 2, lines 1-5 and 27-36; column 3, line 14-23 for Branca; at column 6, lines 32- 62; abstract, line 6-7; column 13, line 8-9 for Leck.

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In a very close examination on the Applicants' argument as "each reference is not directed to make melt processible blend", attention is on the accountable statement disclosed in column 2 at lines 1-10 for Branca as well as in column 6 at lines 40-42 for Leck. **In order to conclude with such a statement by using different amount of PTFE copolymer to blend with PTFE homopolymer, the references would have also prepared such a melt processible PTFE blend** in addition to prepare a non-melt processible PTFE blend.

With respect to other issue pointed out by the Applicants on "a broader range of viscosity is found in Leck's blend" after conversion of units, the examiner has found that such a broad viscosity is only for FEP and PEA 9column 6, line 59-62), not for the PTFE blend. Therefore, **the examiner's rely on inherent properties is reasonable.**

13. Regarding the rejection of new independent **Claim 5**, it relates to a container using the composition of Claim 1 but using **30** to 55 by weight of polytetrafluoroethylene to blend with the modifier PTFE. Please refer to Leck on abstract at line 1 to make a cookware, Branca on column 1 at line 14-15 to make a tube, and Heffner to make a fiber-containing molding article by using such a melt processible polymer blend.

### ***Conclusion***



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14. With respect to **Claims 1-5**, all directly relate to the pre-amended Claims 1-4, they still carry the same scope of original limitations. Therefore, the same rational recited in the rejection of original Claims 1-4 can be applied to reject Claims 1-5.

15. Applicant's amendment **necessitated the new ground(s) of rejection presented in this Office action**. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

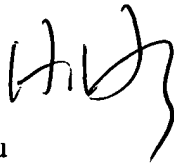
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

Patent Examiner, Art Unit 1713, USPTO

March 18, 2005



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